

## **West Campus Storm Drain Project**

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Project Web Site: <http://www.tuscaloosa-al.gov/index.aspx?NID=918>

### **Introduction:**

The West Campus Storm Drainage Project is designed to have long-term, significant impact by **improving livability, improving safety, creating jobs, and stimulating the economy**. It is also **innovative**, is the result of a **community partnership** between the City of Tuscaloosa and The University of Alabama, and will improve **security**. This is a **transportation infrastructure project**. It will be **located** in Alabama, in the City of Tuscaloosa, in Tuscaloosa County, in Congressional District AL-007. It is an **urban** project. The **funding request** is \$23,444,311.00. The project is targeted for completion prior to February 17, 2012.

**Project Description:**

The West Campus Storm Drain Project is designed to eliminate street flooding by removing an existing and inadequate storm drain system and by replacing it with a larger storm drain system. **Safety** and **livability** are adversely affected during rain events. Street flooding impinges on multiple streets over a 315 acre area. The safety of drivers, pedestrians, and bicyclists are affected, and roads are closed until waters can subside. Flooding affects the ability of workers to travel to and from employment, and, thus, impairs economic stability for individuals and the community. Street flooding is so common that many streets have signs erected that indicate that it is unwise to park when rain is expected due to flooding problems. Not only is user mobility is impaired, but access to alternate routes is limited.

In addition to mobility issues, the inability of storm drains to accommodate water forces the contents of the drain and any other contaminates in the water onto walkways, the road surface, and surrounding low lying terrain. Materials in the storm drain overflow include: spilled oil, fuel, and fluids from vehicles and heavy equipment; construction debris; landscaping runoff containing pesticides or weed killers; and materials such as used motor oil, antifreeze and paint products that people pour or spill into a street or storm drain. Most research indicates that chemicals are the number one water pollutant. In general, storm drain pollutants fall into three main categories: litter, such as cigarette butts, cans, paper or plastic bags; chemical pollution, such as detergents, oil or fertilizers; and natural pollution, such as leaves, garden clippings or animal droppings. When these pollutants breach the storm drain system and flood into public

space, this becomes a public health issue. Toxicity is increased in areas with periods without rain that are followed by heavy rain which causes storm drainage systems to overflow. This weather pattern is common in Tuscaloosa where long dry periods are followed by tropical rain showers, where remnants of tropical storms and hurricanes move across the area, and where heavy spring rains cause sustained flooding. A **map** of the project location is shown in Attachment I.

The **cause of the problem** is due to capacity limitations of the existing system. Street flooding occurs because the volume of water flowing to the storm drain system during significant rain events exceeds the capacity of the drain to facilitate the flow of water. Thus, water backs up onto roadways. Some examples of the capacity problem were cited in a report from McGiffert and Associates, LLC in 2005. Site specific limitations include:

- the existing storm drain behind Tutwiler Hall flows at 261% over capacity,
- the existing storm drain in front of Tutwiler Hall flows at 193% over capacity,
- the existing storm drain in the area of Bryant Denny Stadium flows at 126% over capacity,
- the existing storm drain in the area of University Boulevard flows at 137% over capacity, and
- the existing storm drain in the area of Stadium Drive flows at 190% over capacity.

Signage has been erected to indicate where it is unsafe to park when rain is expected. Please see a photo in Attachment VIII. The proposed project is designed to implement a combination open cut and trenchless installation of a new storm sewer system and to eliminate the existing system.

To accommodate installation, a portion of a roadway intersection will be realigned as part of the project.

The **project benefits** are significant. One benefit is that the project design will have limited disruptions to the existing roadway system. During construction, travel to affected areas will only be nominally affected by the project since much of the work will be done underground. This is noteworthy since the site location will be beneath a well traveled road system. Above ground construction could disrupt a road system that: is used by large numbers of community members to travel to and from work and school, facilitates the transaction of business, and services local attractions, government offices, and downtown Tuscaloosa.

Following construction of the storm drain and the road realignment, the community will benefit from a renewed confidence in their ability to traverse streets and walkways. Further, elimination of flooding is estimated to increase interest in further developing retail and housing in the project area. In addition to the problems with road flooding, the area is experiencing the highest unemployment rate in 25 years. In June 2009, Alabama had an unemployment rate of 12.2%. For workers who seek and attempt to retain employment, the inability to rely on public streets for passage to and from work can result in termination or the loss of job offers. If street flooding could be ameliorated, employees will be more able to rely on safe passage and employers and potential employers may be more willing to establish and expand businesses in the flood affected areas.

Initial review of the problem and engineering planning was begun by our consultants, McGiffert and Associates, LLC, in 2005. Though a worthy and needed project, a lack of funding has prevented project initiation. The project will be implemented in two phases. Implementation of the storm drain reconstruction and intersection realignment will have **significant job creation**

**and economic benefits** in the community. The storm drain reconstruction project will result in the employment of 50 full-time employees for a period of 18 months. The project can begin within 120 days of the award notice. The project will be completed in 18 months. The average monthly wage will be \$5,167.79. If these individuals only spent half of this in the community, this would generate \$2,325,505.14 in revenue to local businesses and governments over the 18 month period of the project.

The realignment of the Marr's Spring and Campus Drive intersection will occur at the site of significant storm drainage construction. This portion of the project will take 120 days to start, will be completed in 5 months, and will require the full-time employment of 15 people. This intersection represents the termination point of this project and, therefore, requires reworking the intersection to accommodate the storm drainage construction. With an average monthly wage of \$5,317.31, this will have an estimated impact of \$398,798.32 to the community from wages alone. If these individuals only spent half of this in the community, this would generate \$199,399.16 in revenue to local businesses and governments. The combined impact of both phases is significant and equals a combined wage impact of \$2,524,904.30.

**Long term economic impact** is also expected, but these benefits are difficult to figure. What we know is that street flooding causes streets to be closed. This limits mobility and impacts the ability of residents and visitors to access local businesses, and it makes neighborhoods less desirable to home buyers and renters. It further depresses home values and the amounts that can be charged for rent. The threat of flooding also causes business owners and investors to overlook the area because of concerns about property damage and disruptions to business flow. Providing adequate storm drainage will mitigate these concerns making this area more desirable for economic investment and development.

The City of Tuscaloosa and The University of Alabama enjoy a good working relationship and partner on many projects that benefit our community. While considered **innovative** in many locales, this is an ongoing relationship here. The University of Alabama had a \$1.262 billion impact in 2008, and each home football game had an impact of \$14.2 million. The total impact of home football games alone was \$99.6 million. The campus also occupies a significant amount of acreage and includes numerous roadways. University Blvd, a state road, runs through the center of campus. The storm drainage system crosses several major thoroughfares at multiple points. These major roadways had an average daily usage of 198,413 when last measured in 1998, and road closing due to flooding has significant impact to the community at-large. Further, the main campus consists of 842 acres in the central core of the City of Tuscaloosa, and the storm drainage system runs through this busy and highly traveled area.

The **security concern** in this area is particularly high because of the density of crowds during athletic events. The stadium is a crowd control concern in the state, and it has been identified by the US Department of Homeland Security for Buffer Zone Protection. An average of 7 home football games occurs each year, and this is the second largest venue in the state – second only to the Talladega Motor Speedway. During home football weekends, over 100,000 people are concentrated in the stadium alone. It is estimated that another 30,000 people congregate in areas nearby. In a flood event caused by the inadequacy of the storm drainage system, the mobility of those in the stadium and others in the community at large would be significantly impeded.

The **financial stability and oversight risks** to this project are minimal. It is assumed that this work will be sub-contracted to the University of Alabama for oversight. Budgets are

assigned an account number, and line item budgets are established to correspond to program line items. Approvals and internal checks and balances exist throughout UA's financial accounting system to ensure compliance. Periodic internal programmatic and budget reports ensure that both the project timeline and budget are maintained, and UA assumes full responsibility for programmatic and budget integrity based on Federal Cost Accounting Standards, Government Auditing Standards, and State finance regulations. The intermingling of funds is not allowed, and both income and expenditures are charged to discrete accounts and sub-accounts. To facilitate tracking, income and expenses are assigned codes from a standardized coding system which coordinates with a line-item budget. UA also provides property control.

UA's purchasing system requires multiple levels of approval and reconciliation. No disbursements are made by university divisions without an invoice or contract for service. These expenses are entered into UA's software management programs which prevent overspending in line items and sub-codes and which ensure the security of budgetary control. Reports are provided routinely, and these records are reviewed for accuracy at the departmental level. Projects are included as a part of UA's audit system, and we utilize the services of an independent audit firm that conducts audits each year. UA has historically garnered unqualified opinions.

As of September 30, 2007, UA's assets exceeded \$1.8 billion, liabilities were \$555 million, and net assets exceeded \$1.3 billion. UA's operating budget for the 2008 – 2009 fiscal year includes revenue of \$682.9 million and expenses of \$642.6 million. Standard & Poor's last posted rating for UA is AA / Negative. UA's rating with Moody's Investors Service is Aa3. UA receives revenue from various funding streams which include (but are not limited to) government appropriations, student tuition and fees, use fees, gifts, donations, royalties, investment interest, bonds, bequests, endowments, payment for services, and product sales.

The financial stability of the City of Tuscaloosa is sound. The City of Tuscaloosa's bond rating is currently "Aa2" by Moody's Investors Service and "AA+" by Standard & Poor's. The City adopts annual budgets in both operating funds, the General Fund and the Water and Sewer Fund. Additionally, money is designated in both capital improvement funds.

The City is experienced in overseeing major construction projects including municipal office buildings, water and sewer facilities, fire stations and a downtown parking deck. While organizing these complex projects, the City also maintains tight budget controls over all capital projects. The Mayor, the City's Public Project Committee, the Council Finance Committee and the City staff work to ensure compliance with the bid law and strive to minimize change orders on construction projects. Additionally, the staff is experienced in managing grant funds, warrant proceeds and internal reserves.

The City's Finance Department processes payment requests weekly and assures budget control over both operating and capital funds. All payment requests are approved by at least the City staff member overseeing the project, and at times on major construction projects, an outside engineer or architect.

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**Project and Site Description:**

The **project** will occur in an urban area and will impact 315 acres of which 40% lies within the Tuscaloosa city limits and 60% lies within the University of Alabama campus boundaries. The execution will require the elimination of the existing storm drain system and the construction of a larger storm drain system that will accommodate the water flow during periods of heavy rain. The intersection realignment is needed to allow for significant storm drain construction at the water outflow location. In 1998, the average daily count for major roadways in the area affected by the inadequate storm drain system was 198,413.

The **project parties** will be the City of Tuscaloosa and The University of Alabama. The **total project cost** is budgeted to be \$23,444,311.00. The **source of project funds** will be the US Department of Transportation. **TIGER funds** will account for 100% of the project funding.

**Budget:**

The line item costs for both phases are shown here.

Storm Drain Project –

<b><u>Item</u></b>	<b><u>#</u></b>	<b><u>Unit</u></b>	<b><u>Total Cost</u></b>
subsurface set up	6	each	\$1,260,000.00
84"rcp class 3 storm sewer	3300	lf	\$11,550,000.00
42"rcp class 3 storm sewer	250	lf	\$526,398.60
36" rcp class 3 storm sewer	300	lf	\$420,000.00
72" rcp class 3 storm sewer	400	lf	\$140,000.00
60" rcp class 3 storm sewer	300	lf	\$84,000.00
54" rcp class 3 storm sewer	1500	lf	\$336,000.00
48" rcp class 3 storm sewer	600	lf	\$100,800.00
42" rcp class 3 storm sewer	800	lf	\$112,000.00
36" rcp class 3 storm sewer	1400	lf	\$156,800.00
30" rcp class 3 storm sewer	300	lf	\$31,500.00
24" rcp class 3 storm sewer	300	lf	\$27,300.00
cast in place concrete headwall	1	each	\$42,000.00
trench grate drain	1	each	\$42,000.00
concrete s-inlet, single wing	18	each	\$100,800.00
concrete s-inlet, double wing	20	each	\$126,000.00
concrete junction box, standard	8	each	\$33,600.00
concrete junction box, special	5	each	\$350,000.00
concrete yard inlet	10	each	\$49,000.00
concrete grade inlet	10	each	\$53,200.00
tie to existing storm	20	each	\$42,000.00

inlet			
abandon existing storm sewer inlet	25	each	\$35,000.00
fill existing storm sewer beneath buildings w/ grout	500	lf	\$140,000.00
existing water main relocation	1	ls	\$140,000.00
existing gas main relocation	1	ls	\$126,000.00
existing sanitary sewer relocation	1	ls	\$140,000.00
existing electrical / telecom relocation	1	ls	\$210,000.00
select backfill ALDOT 801 #57 crushed limestone	20000	cyip	\$504,000.00
select backfill ALDOT 825B crushed aggregate base	10000	syip	\$280,000.00
trench foundation material	2500	cyip	\$63,000.00
improved bituminous concrete binder patching ALDOT 429B	10000	sy	\$350,000.00
improved bituminous concrete wearing surface overlay ALDOT 429A	20000	sy	\$112,000.00
milling of existing pavement	10000	sy	\$42,000.00
brick panel removal / replacement	5000	sf	\$105,000.00
concrete sidewalk removal & replacement	2800	sy	\$98,000.00

curb and gutter removal & replacement	3000	lf	\$63,000.00
rip rap	500	ton	\$28,000.00
concrete slope paving at headwall	500	syip	\$21,000.00
topsoil, fertilization, seeding, mulching	5	acre	\$14,000.00
solid sodding	10,000	sy	\$98,000.00
erosion control sill fence - type A	5000	lf	\$49,000.00
ersioin sediment control log	1000	lf	\$8,400.00
temporary site constraint chainlink fencing	1	ls	\$28,000.00
traffic and pedestrain control	1	ls	\$140,000.00
construction layout	1	ls	\$42,000.00
as built survey and record drawing preparation	1	ls	\$14,000.00
		subtotal	\$18,502,400.00
		contingency	\$1,850,800.00
		total set cons costs	\$20,353,200.00
		geotech services	\$56,000.00
		tv inspection of storm drains	\$ 21,000.00
		topo route survey	\$77,000.00
		eng des & prep constr plans & specs	\$61,600.00
		cotw and survey for grade verification	\$291,200.00
		total cost	\$21,980,000.00

Intersection Realignment Project –

Description		M/L Rate	Total Cost
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	<b>Quantity</b>	<b>Unit</b>		
Payment and Performance Bonds	1	ls	5,000.00	\$5,830.00
Mobilization and Demobilization	1	ls	5,000.00	\$5,830.00
Demolition, Clearing, Grubbing, and Site Preparation	1	ls	150,000.00	\$174,900.00
Earthwork	1	ls	25,000.00	\$29,150.00
Roadway Roadbed Processing	2950	sy	1.00	\$3,439.70
Crushed Aggregate Base Course (Limestone), Type B, 12.5", Total Thickness (To be placed in 3 equal lifts)	2950	sy	16.25	\$55,895.13
Bituminous Treatment A	2950	sy	1.00	\$3,439.70
Tack Coat (ALDOT 405A)	296	gallons	2.60	\$897.35
Improved Bituminous Concrete Binder Layer (424B) (220 lbs/sy)	5900	sy	7.50	\$51,595.50
Improved Bituminous Concrete Wearing Layer (424A) 167 lbs/sy (with ALDOT 811 Polymer Additive)	2950	sy	8.00	\$27,517.60
2' Combination Curb and Gutter	1200	lf	5.00	\$6,996.00
24" RC Pipe, Class 3	50	lf	45.00	\$2,623.50
Box Culverts - Material	10	ea	500.00	\$5,830.00
Labor to Install Box Culverts	100	lf	1,000.00	\$116,600.00
Demolition, Paving and Bridge Work	1	ls	50,000.00	\$58,300.00
Curb Inlets (2-wing)	4	ea	5,500.00	\$25,652.00
Silt Fence	2000	lf	2.50	\$5,830.00

Sediment Control Logs	100	lf	6.00	\$699.60
Inlet Protector	6	ea	600.00	\$4,197.60
Erosion Control Maintenance	1	ls	2,600.00	\$3,031.60
ADEM Permit Application and Inspection	1	ls	240.00	\$279.84
Concrete Sidewalk (4" minimum thickness)	914	sy	25.00	\$26,643.10
Handicap Ramps (Including Truncated Dome Strips)	3	ea	890.00	\$3,113.22
Electrical for Required for Street Lights, Post Lights	1400	lf	25.00	\$40,810.00
Post Lights	34	ea	4,800.00	\$190,291.20
Signing and Striping	1	ls	6,500.00	\$7,579.00
Landscaping	1	ls	150,000.00	\$174,900.00
4" Irrigation Sleeve, PVC Schedule 40 (Includes #57 Stone Backfill & Fittings)	120	lf	30.00	\$4,197.60
Survey and Layout	1	ls	1,725.00	\$2,011.35
Traffic Control	1	ls	8,050.00	\$9,386.30
Traffic Signal	1	ea	350,000.00	\$408,100.00
Blue Phone	1	ea	7,500.00	\$8,745.00
<b>Total</b>				<b>\$1,464,311.89</b>

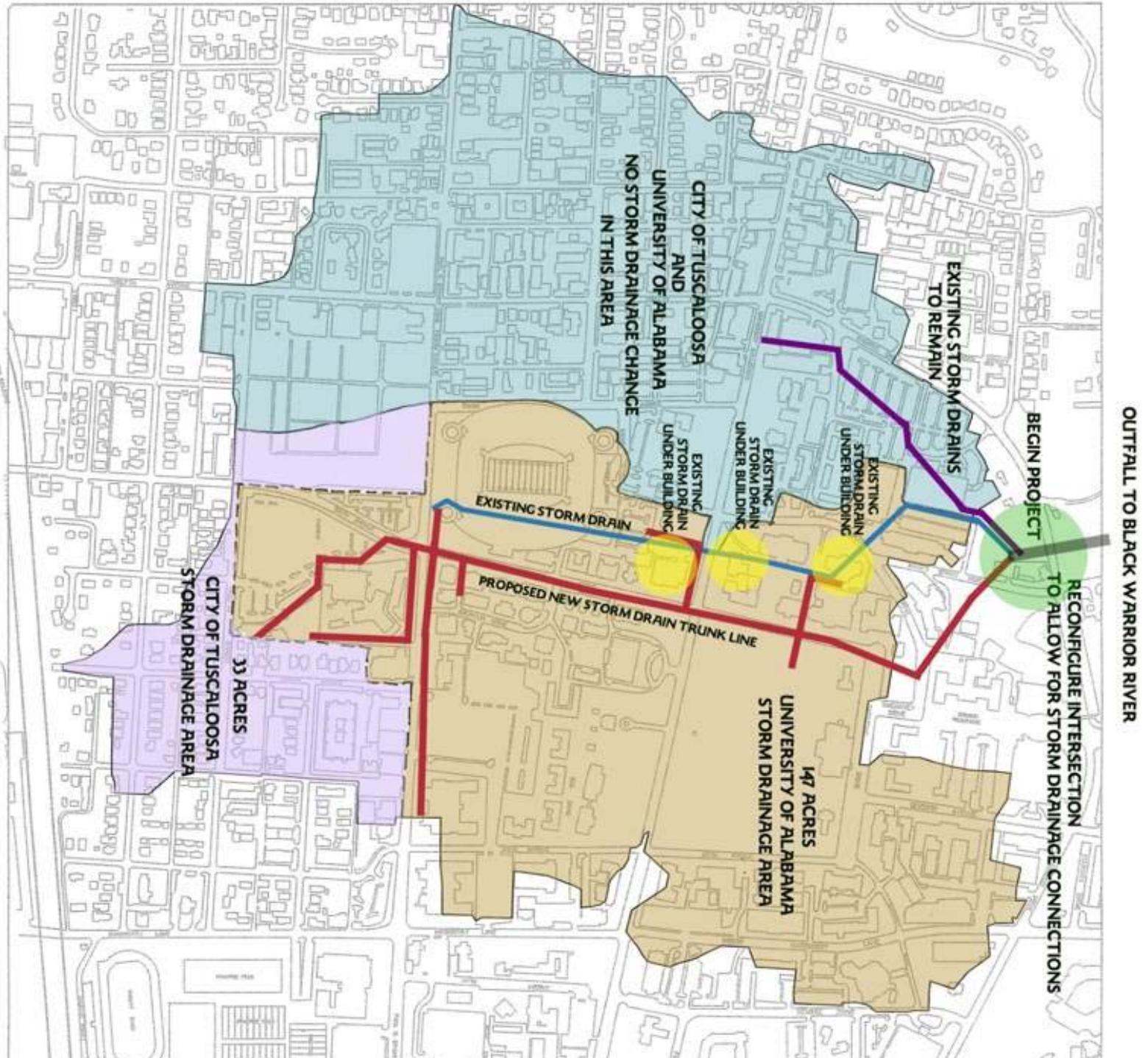
**Budget Narrative:**

The University, in conjunction with a consultant, compared several relevant projects which have recently been completed or bid. These included projects on the University of Alabama campus, in the local region, and institutional research buildings nationwide. These actual costs were then adjusted for inflation and any relevant geographical considerations (labor markets, etc.) and applied to the program size for this project.

**Attachments:**

- I. Map of the Project Area
- II. Federal Wage Rate Requirement
- III. National Environmental Policy Act Requirement
- IV. Statement Regarding Protection of Confidential Business Information
- V. Reporting Requirements Statement
- VI. Photos of Street Flooding
- VII. Photo Street Sign Warning of Flooding
- VIII. Drainage System Schematic with Street Overlay

Attachment I – Map of the Project Area



**Attachment II: Federal Wage Rate Requirement**

GENERAL DECISION: AL20080002 02/08/2008 AL2

Date: February 8, 2008

General Decision Number: AL20080002 02/08/2008

Superseded General Decision Number: AL20070024

State: Alabama

Construction Type: Highway

Counties: Blount, Calhoun, Etowah, Shelby, St Clair and Tuscaloosa Counties in Alabama.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, bulding structures in rest areas projecs, and railroad construction; bascule, suspension & spandrel arch bridges desgned for commercial navigation; bridges involving marine construction; other major bridges)

Modification Number	Publication Date
0	02/08/2008

\* SUAL2002-002 05/31/2002

	Rates	Fringes
Carpenter.....	\$ 10.72	
Concrete Finisher.....	\$ 11.29	
Electrician.....	\$ 15.40	
Ironworker		
Reinforcing.....	\$ 11.27	
Structural.....	\$ 11.00	
Laborers:		
Asphalt Rakers.....	\$ 8.91	
Concrete Laborers.....	\$ 8.39	

Grade Checker.....\$ 8.82  
 Pipelayers.....\$ 9.60  
 Powderman/Blaster.....\$ 8.11  
 Side Rail/Form Setters.....\$ 8.16  
 Unskilled.....\$ 8.11

Painter.....\$ 10.00

Piledriverman.....\$ 10.91

Power equipment operators:

Aggregate Spreader.....\$ 10.11  
 Asphalt Distributor.....\$ 13.61  
 Asphalt Drier.....\$ 9.36  
 Asphalt Paver.....\$ 9.56  
 Asphalt Spreader.....\$ 11.20  
 Backhoe, Clamshell,  
 Dragline, Sand Shovel.....\$ 14.06  
 Boom Truck.....\$ 10.00  
 Boring Machine.....\$ 9.00  
 Broom Operator (Sweeper)....\$ 10.50  
 Bulldozers.....\$ 11.60  
 Concrete Laborers.....\$ 13.61  
 Concrete Paving Machine.....\$ 12.00  
 Concrete Saw.....\$ 9.25  
 Cranes and Derricks.....\$ 13.78  
 Drilling Machine.....\$ 11.84  
 Front End Loader.....\$ 8.90  
 Mechanic.....\$ 12.23  
 Milling Machine.....\$ 10.10  
 Motor Patrol and Motor  
 Grader.....\$ 12.08  
 Oiler/Greaseman.....\$ 10.52  
 Pavement Breaker.....\$ 9.00  
 Roller (self propelled)....\$ 9.25  
 Scraper.....\$ 8.76  
 Striping Machine.....\$ 11.00  
 Track-Hoe.....\$ 9.77  
 Tractor & Loaders (all  
 other work).....\$ 9.60  
 Tractor and Loaders (farm  
 rubber-tired).....\$ 9.40  
 Traffic Control Specialist..\$ 8.11

Truck Driver

Multi-Rear Axle.....\$ 9.86  
 Over 35 Tons.....\$ 12.12  
 Single Rear Axle.....\$ 8.32  
 Under 1-1/2 Tons.....\$ 8.11

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 WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.  
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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal

process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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### **Attachment III: National Environmental Policy Act Requirement**

This project is currently following the NEPA process. It is not anticipated that it will have an impact on the natural or social environment. As stated in the application, it is anticipated that there will be a positive impact on both the economic and social environments.

The NEPA process is being completely followed. At this time, there are no known refuges, wetlands, floodplains or endangered species that will be affected. The project has identified an historic railroad trestle and a recreation area owned by the City of Tuscaloosa. These will be addressed appropriately in the NEPA process. It is the intent of this project to make these more available and easily accessible to a larger segment of the community.

#### **Current Status:**

Archaeological and historic studies are underway.

Preliminary layouts have been developed.

Public Involvement Meeting: September 10, 2009

Anticipated Document Completion: June 30, 2010

**Attachment IV: Statement Regarding Protection of Confidential Business Information**

All information submitted as a part of this application uses publicly available data that can be made public and all methodologies are accepted by industry practice and standards, to the extent possible.

**Attachment V: Reporting Requirements Statement**

The City of Tuscaloosa has reviewed and is committed to following the reporting requirements, as required, in Section 1201 (c), Section 1512 and Section 1609. The city will follow all requirements and guidelines as required.

The City of Tuscaloosa has a long history of receiving various federal and state grants and is used to following and adapting to different guidelines, as related to grants. The city has a professional staff, including engineers, planners, grant administrators, and technical managers, equipped to ensure that all guidelines and reporting requirements are met.

Attachment VI – Photos of Street Flooding





Attachment VII – Photo Street Sign Warning of Flooding



Attachment VIII -- Drainage System Schematic with Street Overlay

